





# Passages

Visitor's Guide to Wind Cave National Park

2004

# Wind Cave National Park - From the Paleozoic to the Prairie!

Imagine hiking up a gently sloping ridge and entering a quiet forest near a steep canyon. After a short stop to catch your breath you walk to the edge of the canyon. Along the way you startle an animal - what was that? A small horse? There, in the canyon you see a herd of rhinoceros. Rhinoceros! Small horses? What time machine did you enter?

Actually, had you lived here 32 million years ago, during the Oligocene epoch, you might have encountered this scene. Last summer, park scientists discovered the remains of animals that we would describe as unusual for the modern prairie of South Dakota. While these kinds of fossils have been found as near as the Badlands, the rhinoceros is the most complete skeleton of a *Subhyracodon* ever dis-



covered in the Black Hills and the largest fossil ever found in Wind Cave National Park. This discovery reveals the environ-

ment that existed here 32 million years ago.

Other Oligocene animals have been found in the same place. They are a *Mesohippus* - that small greyhound-sized horse you might have startled; a *Leptomeryx*, a deer-like animal the size of a modern house-cat; a *Paleolagus*, a rabbit similar to our rabbits; and a tortoise.

Exploring Wind Cave National Park provides an opportunity to learn about many of the Earth's hidden secrets. By visiting the cave, you can see fossils that geologists believe date back to the Paleozoic Era, some 320 million years ago. These sea fossils indicate that had you lived here then, you would have needed a boat since geologists believe this part of South Dakota and most of the United States was under a vast inland sea. The remains of shell

animals and corals are visible in the limestone in which the cave formed.

That sea set the stage for the later development of the grasslands that supported the *Subhyracodon* and today's prairie where leading to the stage of the stage



and today's prairie where bison and elk reside. The limestone which formed while the sea was

Contacting the park: In case of **Emergency** dial 911 Visitor Center: 605-745-4600 www.nps.gov/wica/ here became the base for the soils in which the grasses grow. The uplift of the Rocky Mountains to the west caused changes in airflow and moisture which provided the climate needed for the grasslands.

This Paleozoic sea and uplifting action also provided the right conditions for the development of a very large cave. The sea provided easily dissolvable limestone. The uplift provided the cracks. Acid rich water became trapped within those cracks and began to dissolve the limestone to create one of the world's longest caves. If you visit the cave, these cracks and the sea fossils can be seen in many places.

Visitors to the park can also return to an earlier time of human history. Imagine being part of a tribe of nomadic Indians hunting for game in the valley near the visitor center. Here prehistoric tipi rings have been found. These tipi rings help us understand the people who used the area long before European settlement.

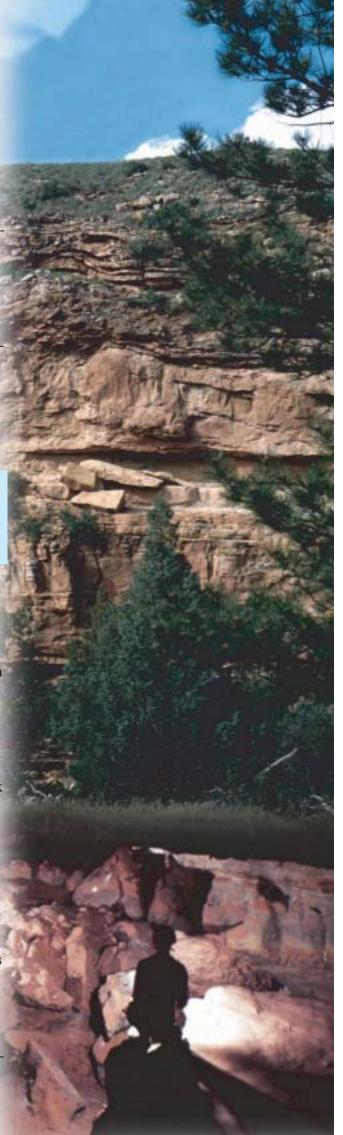
...you are with explorers beginning to document the labyrinth of passageways beneath the earth's surface.

You can experience early settlement times by participating in a candlelight tour through the cave. You can imagine you are with explorers beginning to understand and document the labyrinth of cave passageways.

Exploring the visitor center area provides an opportunity to imagine yourself as part of the 200-man Civilian Conservation Corp crew. These men worked as a team to bring a small park into the future during the Great Depression by building the visitor center, elevator building, and roads, as well as fences and stock dams for wildlife. They also installed cave lights and stairs to make cave travel easier.

Okay, back to our hike - you crest the ridge overlooking that steep canyon. Two golden eagles soar along on the wind. A herd of bison graze on the prairie below. You walk to the edge of the canyon, startling a bull elk on the way. Through conservation efforts of our ancestors and the preservation of special places like national parks, we can experience what it might have been like to travel with the early mountain men or pioneers as they crossed the vast prairie.

These encounters and scenery can be experienced while hiking any of the ridges, ravines, or trails that weave through the park. Come explore the past and the present at Wind Cave National Park.



# **Visitor Information**

### CHECK OUT OUR WEBSITE

If you are planning your visit or doing a project about Wind Cave, look for us on the Internet at www.nps.gov/wica/. Our website has almost anything you might want to know about the park, the cave, the animals, or the plants. We have even included some animal sounds. If you want to know what's happening in the park, this is the place to be.



# FOOD, LODGING AND GASOLINE

Wind Cave National Park operates one campground and has limited food and beverage vending services in the visitor center. There are no lodging, gasoline, grocery, or restaurant services available in the park. These services are available in the nearby towns of Hot Springs (15 minutes south) and Custer (25 minutes north). The town of Pringle (10 minutes west) has gas and limited food services. For information regarding services in Hot Springs, call 605-745-4140 or 800-325-6991. In Custer, call 605-673-2244 or 800-992-9818.



Custer State Park, bordering Wind Cave National Park on the north, has campgrounds, restaurants, motels, and some grocery services. Information about Custer State Park is available by calling 605-255-4515. For information about state park lodging, please call 800-658-3530.

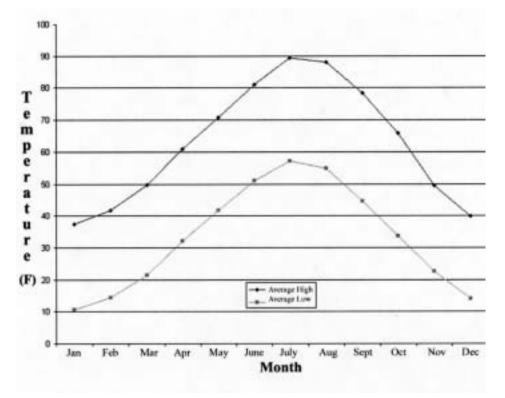
# WEATHER

Wind Cave National Park and the rest of the southern Black Hills are much warmer and drier than the northern hills. Winter snowfall averages 30 inches annually. The spring and fall can be warm and sunny, or rainy and snowy with a chilly wind. Summer brings warm daytime temperatures with cool evenings.

Severe thunderstorms are common in June and July and occasionally in August.
Thunderstorms can be dangerous and visitors should be prepared

for them. Large hail is common and the storms can produce severe lightning. Slow moving storms can dump great amounts of rain over a small area. The steep canyons, rock cliffs, and small creeks of the Black Hills are prone to flash flooding. Be cautious when camping near a creek bed even if it is dry. Move uphill if flooding starts.

For current forecasts and warnings, listen to NOAA Weather Radio on 162.425 MHz in the southern Black Hills or 162.550 MHz in Rapid City.



# RANGER PROGRAMS

When you are planning your visit, plan to attend a ranger-led program. There are many interesting programs each day. Programs include cave tours, a prairie hike, discovery programs, or evening campfire programs. Topics might include cave history, geology, the relationships of the park's animals and plants, the importance of fire to the park's ecosystems, or many

other natural or cultural history topics. For more information, please ask at the visitor center information desk or check out



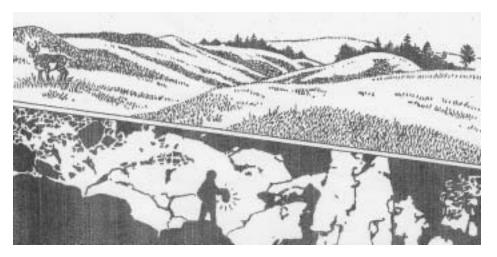
pages 6 and 7 in this newspaper.

### VISITOR CENTER EXHIBITS

The Visitor Center is a great place to start your park visit. Whether you are intrigued with the cave, prairie, or both, it is easy to discover more about the park by exploring the exhibit rooms.

The upper exhibit room has displays ranging from how the Plains Indians used the bison to how the park manages the prairie. The cave exhibit room explains cave formations, the development of the cave, and the park's colorful history. A video about the cave, the prairie, and the park is shown in our auditorium.

Stop at the visitor center for information about cave tours, or for maps, exhibits, book sales, backcountry permits, and Golden Age and Golden Access Passports, or National Parks Passes.

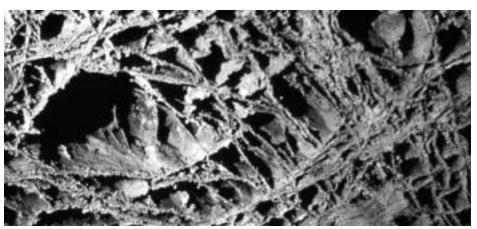


### THE CAVE

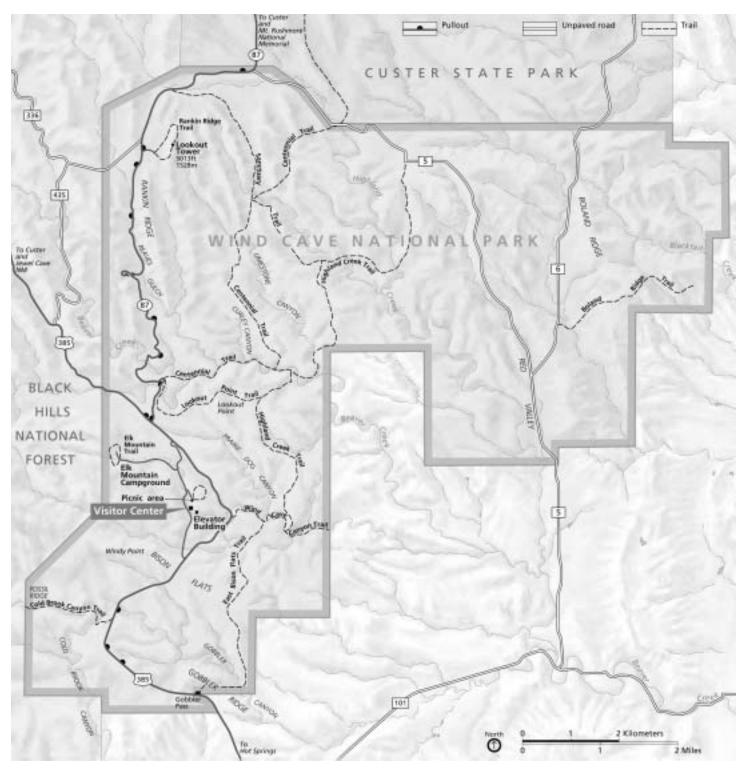
Wind Cave is quite different from other caves. Instead of stalactites and stalagmites, the cave is decorated with boxwork. Boxwork is a crystalline formation that probably predates the cave. It was formed when calcite filled in tiny cracks within the limestone. Later, when the cave formed, water dissolved the limestone and revealed the delicate crystal fins that had filled the cracks.

Wind Cave is also known for its length and the maze-like configuration of its passageways. All of the known cave passageways lie beneath a land area of about one-square mile. As of March 2004, the cave was 111 miles long making it the sixth longest cave in the world. Few caves are longer, but none as complex as Wind Cave.

To see the cave, stop at the visitor center where all cave tours begin. Cave tours are offered daily (except Thanksgiving, Christmas, and New Year's Day) throughout the year. Tour schedules vary throughout the year. The schedule is listed on page 7.



# Hiking, Camping, and Backcountry



### HIKING TRAILS

Wind Cave National Park includes 28,295 acres of prairie grasslands and ponderosa pine forest. The park is a fascinating combination of ecosystems where eastern habitats meet



western ones. They support a diverse assortment of life. Hiking any of the 30 miles of trails can help visitors better understand the park. You may even want to leave the trails and travel crosscountry along the ridges, through the canyons, or across the rolling prairie. A topographic map is recommended and can be purchased at the visitor center.

#### CENTENNIAL TRAIL

An excellent example of the diversity of the park can be seen by hiking Wind Cave's six-mile section of the Centennial Trail. This trail crosses the prairie, climbs the forested ridges, and explores the wetter, riparian habi-

tat of Beaver Creek. The 110-mile Centennial Trail meanders from Wind Cave National Park north through the Black Hills.

#### NATURE TRAILS

There are three nature trails in the park. The Rankin Ridge Nature Trail leads to the highest point in the park where the views are spectacular. The Elk Mountain Nature Trail explores an ecotone, or meeting zone, where the grassland and forest converge. The Prairie Vista Nature Trail starts at the visitor center and explores the prairie grasslands. Booklets are available at the trailheads. Each trail is about one mile in length.

# **C**AMPING

Wind Cave National Park maintains a developed campground one-mile north of the visitor center. The campground is open all year and rarely fills to capacity. Occupancy is on a first-come, first-served basis. Each site accommodates up to eight people. There are two sites accessible for campers with disabilities.

Restrooms have cold water and flush toilets, but no showers, hook-ups, or dump stations. To protect park resources firewood can not be collected, however, it is available for \$3.00 per bundle.

The fee for camping is \$12.00 per night. In the off season when facilities are limited, typically late fall through early spring, the fee is \$6.00 per night. Visitors holding a Golden Age or Golden Access Passport pay half price.

Group camping is available by reservation. For more information contact the park at 605-745-4600.



# BACKCOUNTRY

#### **C**AMPING

The backcountry of Wind Cave National Park offers visitors an excellent opportunity to experience and enjoy the abundant resources of the park. Backcountry camping is permitted in the northwestern part of the park. Within this area are several habitats and a variety of plants and animals.

Backcountry campers must have a permit. Permits are free and can be obtained at the visitor center or at either of the Centennial Trailheads. For the protection of park resources and for your safety, follow all regulations during your stay. Leave no trace of your visit. Pets are not permitted in the backcountry.

# SIMPLE RULES TO PROTECT PARK RESOURCES

Park resources are for everyone to enjoy.

Do not disturb or remove plants, wildlife,
antlers or bones, or any other cultural or natural feature. These features are all part of the
park ecosystem and are important to the park
history or for the survival of other animals and
plants. They are protected by federal law.

Animals in the park are wild and unpredictable. *Do not feed the wildlife*. When you feed animals they become attracted to highways where they can be struck by passing

vehicles. They also may become dependent on handouts and fail to survive the winter. *Hunting in the park is prohibited*.

When driving park roads, *obey all speed limits*. They are strictly enforced to protect you and the wildlife. Vehicles (including bicycles) must be on the roadways at all times. *Off road driving or bicycle riding is prohibited*.

Be aware that rattlesnakes are sometimes found in prairie dog towns and in rocky areas of the park. Bison also frequent prairie dog towns. They can run 35 mph and may weigh a ton! Do not approach them or any wildlife.

To protect your pet and wildlife, pets must be on a leash at all times and are not permitted on park trails or in the backcountry.

Do not leave traces of your visit. Litter is unsightly and spoils the park experience for everyone.



# Have you ever wondered.....

# Can Fire Really Help the Prairie?

The winds are picking up - thunder and lightning are crashing all around. Lightning strikes a tree on the hillside nearby. A small fire starts; it has been very dry and the small fire grows larger and larger...

What should our reaction to this fire be? One of apprehension or one of approval - where does fire fit into today's National Parks?

Fire has many uses in the ecological scheme of things and has been a major force on our planet for millions of years. Fire cleans our wild lands of dead and dying debris. Fire can keep the forest from encroaching onto the prairie. Fire can be used to control non-native plants and encourage native species to thrive, providing a more diverse food source for wildlife. It provides standing dead trees and other spaces to be used as home for many animals. Fire can also be destructive. If it burns too hot it can sterilize the soil preventing plants from growing for months. It can destroy the homes of many animals. There is a fine line between whether fire is helpful or harmful.

Park managers know that fire is an integral part of America's wild places. Scientists determined that, historically, the prairie lands at Wind Cave National Park burned on an eight to twelve year cycle. Without fire, the prairie cannot be properly sustained and eventually there will be a forest where the rolling grasslands once existed. If we want to keep our prairies, we need fire to be part of the cycle. The park's fire management team recognizes this need and often uses prescribed fire to improve park ecosystems.

However, one of the challenges of using fire as a tool is the growing number of people living near or in our national parks and forests. Whenever there is a fire near a home, there is a chance of disaster. More than 100 years of fire suppression in the Black Hills have resulted in a heavy buildup of dead vegetation, dense stands of trees, and a shift to species that have not evolved and adapted to fire. Because of these conditions, today's wildfires tend to be larger, burn hotter, and spread



Lightning strikes can cause wildfires

farther and faster. This makes them more severe, more dangerous, and more costly in human, economic, and ecological terms.

At Wind Cave, firefighters immediately attack all wildfires. However, we also use fire as a tool to help protect the park's prairie and forests. The park's prescribed fire plan attempts to mimic that of nature and, if conditions are right, we will burn 10% of the park every year.

The recent record fire seasons have sparked the flames of discussion on how to best live and work with fire. Fire is paradox; it can cause new plants to sprout within days or damage them beyond recovery. The more park managers and the public know about fire, its importance, and its dangers, the better prepared we will be to safely use fire as a land management tool.

# Are They Really Mowing the Prairie?

Visitors to the Wind Cave National Park prairie encounter a unique mix of plant life, from tall, waving grasses to a colorful profusion of wildflowers. This colorful, seemingly endless sea of grass is a diverse ecosystem containing species from eastern tall grass and western short grass prairies. These plants have adapted to this environment and provide a habitat for an equally varied population of wildlife.

Diversity is important to the prairie; it is the way the prairie confronts adversity and it protects the system from biological disasters. During dry years, short grasses thrive; in wet years, tall grasses dominate. Some grasses grow in warm seasons, others in cool seasons. When insects or diseases strike, some plants suffer - others survive. This variety ensures that there will always be a prairie.

However, this diverse ecosystem is not without threats. One of the most serious is the invasion of non-native plants. In some areas where non-native plants have invaded, native plants are being replaced. Non-native plants are a problem when they out-compete native vegetation for space, nutrients, and water. Canada thistle is one non-native species that park managers are concerned about. It is an invasive plant that can completely dominate an area where dozens of native species once grew.



Researching the diverse plants of the prairie

Resource specialists must carefully plan how to control the proliferation of these and other non-native plants. The tools at hand are chemicals, bio-controls (insects), and mechanical controls or manual labor.

At Wind Cave National Park, we have learned that water can seep through the ground and enter the cave in less than 8 hours in some places. To use herbicides to



Using a weed whip to cut thistle

control non-native plants could introduce unwanted chemicals into the cave. Any decision to use herbicides within the boundaries of the park must take this challenge into consideration.

Bio-controls use insects that live where the non-native plants, in this case Canada thistle, originated. These insects helped restrict the spread of these species in their native habitat. Suppling these controls, or insects, could limit the spread of the plants here. However, botanists have found that these insects can sometimes attack native thistles, so this may not be the answer either.

That leaves mechanical control - or mowing. Botanists have learned that areas heavily infested with Canada thistle can be effectively controlled by repeated mowing. They have found that when the thistles are cut just before the flowers or seedheads bloom the plant must use stored energy to produce flowers again. Repeated mowing can drain the plant's energy, killing reserves stored in its roots. This weakens the plant and its ability to reproduce.

To protect the seemingly endless sea of grass, we must understand the effects of invasive non-native plants and learn how to control them. Mowing patches of thistle on the prairie is just one tool park managers use to protect the diversity we encounter in this diverse national park.

# Why Is That Animal Wearing A Collar?

ne of the greatest thrills of visiting a national park is the opportunity to see wild animals. It's also a great place to study animals and their habitats. One of the current studies at Wind Cave National Park is dealing with Chronic Wasting Disease (CWD). This brain disorder disease affects deer and elk and was first noticed in the park in 2002. To begin the study forty deer were trapped, tested for the disease, and fitted with radio location collars.

This study will allow biologists to determine the density levels of the deer population, their movement patterns, and the prevalence of CWD within the herd. Currently, there is limited understanding of the causes of CWD or how it spreads. Through this project, we hope to better understand the disease and learn how to protect these animals.

Another animal of concern in the park is the pronghorn antelope. The purpose of this study is to determine why their population in the park is dwindling. In 2001, eight females were captured and fitted with radio location collars. Using the location collars we tracked their movement and their reproduction rate. We can tell when the female pronghorn gives birth and can study the young as well. Thirteen fawns were

collared. By following their movements, we can learn about their rate of survival and what predators they face.

Another animal that visitors might see with collars are coyotes. Again, biologists are trying to determine the coyotes' movements in and out of the park, diseases that affect them, and the animals they tend to prey on.

Understanding the move-

Releasing collared deer

ments, habits, and population density levels of these animals will help park managers understand the individual species and the connections between species. By building a strong information base, biologists can determine patterns that affect the animals and learn the best ways to promote healthy populations of wildlife within the park.

# Why Is That Fence in the Middle of the Park?

The diversity of ecosystems within Wind Cave National Park has long ■ been recognized as remarkable. These diverse ecosystems were one reason that, in 1913, the American Bison Society selected the park as a place to return bison to the South Dakota prairie. In 1999, The Nature Conservancy identified 16 exemplary plant communities in the Black

Fence (center of picture) protects hardwoods

Hills; nine of those sites are within Wind Cave National Park.

Recently, park botanists noted that the park had few young or middle-aged aspen, cottonwood, or oak trees. They think this might be the result of large herbivores, such as elk or deer, browsing, or eating the young plants. To investigate the impacts of browsing on the hardwood trees and shrubs, resource specialists built

fences around some areas to create exclosures, or places where elk and other large animals cannot go.

In 2003, the park joined with the Rocky Mountain Elk Foundation to build wildlife exclosures to protect several aspen stands. This joint project will protect aspen from the browsing effects of elk and deer. When the trees are large and strong enough, the need for the fences will be re-evaluated. Currently the park has 12 exclosures protecting hardwood communities.

Another problem for these hardwoods is competition from an encroaching ponderosa pine forest. Occasionally, pine growth is so thick that aspen and other hardwoods do not receive enough sunlight or moisture to thrive. In some exclosures, park employees have mechanically thinned the pine forest to allow the hardwoods to establish groves. Fires can also thin the forest, but if a fire happened where the pine forest is extremely thick, the fire could be devastatingly hot and the aspen and other hardwoods could be damaged beyond recovery.

Managing the wildlife populations while protecting plant communities can be a challenge. Through awareness, the broad variety of plant communities for which the park has always been recognized will be here for park visitors to enjoy.

# Why Would You Explore a Cave?

Why don't you check that lead?" the trip leader suggested. As I blew the air out of my lungs, making my chest small enough to squeeze through the tight cave passageway, my optimism wasn't real high. The most I was hoping for was a place to turn around so I wouldn't have to wiggle back out. But to my surprise, the confining walls disappeared. I found myself in a large room with passages going everywhere. As I shined my headlamp around the room, I wondered if this was the first time light had ever reflected off the glittering crystals. For the first time in my life, I truly understood what a wilderness is.

Protecting this fragile cave wilderness comes with understanding it, knowing where it is, and what's in it. To find new cave passages, explorers follow known surveyed routes to places called "leads." These leads are the beginnings of passages that haven't been mapped or have never been entered. These passages can go five feet or five miles explorers never know how far a passage will go until they start into it.

Once the explorers enter unknown cave, they begin their survey. They use a compass to determine the direction of the passage, an inclinometer to learn the slope of the passage, and a tape measure to find the length of the passage. With each turn of the passage, this information needs to be obtained and a new part of the cave is mapped.

While mapping and exploring, cavers also keep an inventory of cave formations and geological, biological, hydrological, and cultural resources encountered on each survey trip. This information, or database, helps the cave management staff identify relationships that might be impossible to notice otherwise.

In the last several years, the park staff has been using this information to determine changes occurring in the cave due to alterations in the natural flow of water in the visitor center area. Because of the invento-



Exploring cave passageways of Wind Cave

ries, cavers know the location of the wet areas in the cave. By conducting dye traces, resource managers were able to track the flow of water off the parking lot, determine where the water traveled through the cave, and monitor the effects of any changes within the cave.

Resource managers quickly realized that the visitor center parking lot was funneling potentially harmful chemicals into the cave. While only trace amounts of pollution have been found, microbes and other life forms in the cave's fragile ecosystem could be affected. To remedy this, the old asphalt parking lot is being replaced with a concrete parking lot and a filtering system that will provide a more natural flow of water and prevent polluted water from entering the cave.

Wind Cave is an incredible wilderness and exploring the cave provides park managers with a wealth of information. These and other projects ensure that this expanding wilderness will remain protected for future generations!

# Ranger Programs

# **EDUCATIONAL OPPORTUNITIES**

Wind Cave offers a variety of wonderful opportunities to learn about the natural resources of the park. Ranger guided hikes, cave tours, or campfire programs provide interesting information about many different aspects of the park. Exploring the visitor center, participating in the Junior Ranger Program, or hiking in the park are also great ways to discover what is special about this national park.

Teachers wanting an educational opportunity for their students

can participate in the park's *Connections* program. This Parks as Classrooms program allows students to explore the park with a ranger. The program is offered in late April and early May.

The park also has a teaching unit and trunk titled *Water in the Environment*. This program is available from the park or on the website at www.nps.gov/wica/. The environmental education programs and the trunk are free. For more information call the park at 605-745-4600.

### LEARNING ABOUT THE CAVE

#### **CAVE TOUR INFORMATION**

All tours are ranger-guided and leave from the visitor center. Tickets are sold on a first-come, first-served basis at the park visitor center. Tickets must be purchased at least five minutes before tour times. The cave temperature is 53°F (11°C) year round. A jacket or sweater is recommended. Good walking shoes are required.

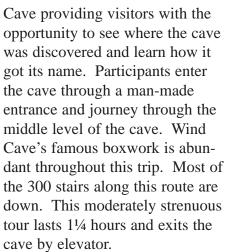
#### GARDEN OF EDEN TOUR

This 1-hour tour is the least strenuous. It is a wonderful sample of Wind Cave. Small amounts of all of the beautiful cave formations - boxwork, popcorn, and flowstone - are seen along the ¼-mile trail. The tour is for people with limited time or abilities. It enters and exits the cave by elevator and has 150 stairs.



#### NATURAL ENTRANCE TOUR

This tour includes a visit to the natural entrance of Wind



#### FAIRGROUNDS TOUR

This 1½-hour tour explores both the upper and middle levels of Wind Cave. Boxwork is abundant along the trail in the middle level of the cave. In the upper level of the cave, the trail winds through large rooms and into areas where popcorn and frostwork can be seen. This is the most strenuous walking tour. The tour enters and exits the cave by elevator. There are 450 stairs along the route with one flight of 90 steps up.

# WALKS AND TALKS

#### PRAIRIE HIKE

Take a hike with a ranger! Explore the park's varied habitats with this 2-hour summer activity. The daily hikes begin at the visitor center then the group will drive to a nearby trailhead. Bring drinking water and wear hiking boots or sturdy shoes. Check at the visitor center for details.

#### **CAMPFIRE PROGRAM**

Become better acquainted with Wind Cave National Park by attending an evening campfire program. These talks are presented nightly during the summer at the Elk Mountain Campground amphitheater. Topics may include



wildlife, plants, geology, cave exploration, park management, and history. The programs last about 45 minutes.

#### **DISCOVERY ACTIVITY**

Daily, during the summer, ranger talks or demonstrations take place at the visitor center. These programs explain some facet of the park. Topics may include local wildlife, plants, geology, area history, and cave surveying. Check at the visitor center for meeting place and topic.

# JUNIOR RANGERS

The Junior Ranger Program is an exciting opportunity for children and their families to learn about the park. Becoming a Junior Ranger helps youngsters understand the park's ecosystems, the cave, and the animals. It also helps them learn how they can help protect all parts of our environment. Junior Ranger booklets are available for \$1.50 at the bookstore. There are activities for children up to age 12.

This year through a Kodak and National Park Foundation grant, we will be taking photographs of the accomplishments of our Junior Rangers. These youngsters will



then be able to share their pictures and adventures with families and friends.

# SPECIALTY CAVE TOURS

#### CANDLELIGHT TOUR

Experience the cave by candle-light. This tour takes place in a less developed, unlighted part of the cave. Each participant will carry a candle bucket. Shoes with non-slip soles are required. No sandals! This tour is limited to 10 people and the minimum age is 8. This strenuous tour covers 1 mile of rugged trail and lasts 2 hours. Reservations are strongly recommended. Reservations are accepted beginning one month before the tour. Please call the park at 605-745-4600 for more information.

# TOURS FOR VISITORS WITH SPECIAL NEEDS

The visitor center and the cave are accessible to people with limited mobility. Please call ahead to make special arrangements or ask at the information desk for a special tour. Limited areas of the cave are accessible to wheelchairs. The fee for the tour is \$5.00 for adults and half price for Golden Age or Access Passport holders. Please call the park at 605-745-4600 for more information.

#### WILD CAVE TOUR

Explore the cave away from the developed trails. On this 4-



hour tour visitors will be introduced to basic, safe caving.

Wear old clothes and gloves, as much of the trip will include crawling. Long pants, long sleeved shirts, and sturdy, lace up boots or shoes with non-slip soles are required. The park provides hard hats, lights, and kneepads.

Please do not bring jewelry, watches, or other valuables on the tour. Clothing worn on the Jewel Cave Wild Cave Tour is not permitted in Wind Cave since this clothing could be covered with manganese.

This tour is limited to 10 people and the minimum age is 16. We require a signed parental consent form for participants 16 and 17 years old. Reservations are required. Reservations are accepted beginning one month before the tour. Please call the park at 605-745-4600 for more information.

# Program and Cave Tour Information

# CAVE TOUR INFORMATION & SAFETY

ll tours are ranger-guided and Aleave from the visitor center. Tickets are sold on a first-come, first-served basis, except for the Candlelight and Wild Cave Tours (see Reservations below.) During peak summer visitation, long waits for tours may be encountered. To avoid waits, the best time to visit the cave is during the early hours of the day. During the summer, weekends are good times to visit; Tuesdays and Wednesdays are the busiest days. Reservations for school and organized groups are available (see Reservations).

A light jacket or sweater is recommended for all cave tours, as Wind Cave is 53°F (11°C) throughout the year. Good walking shoes are required on all tours. Cave trails are dimly lighted and trail surfaces may be uneven, wet, and slippery. Do not wear sandals. Ceilings along the tour route

are low, requiring some bending.

For the protection of the cave, do not touch or remove rocks or formations and do not step off the trail. There are no restrooms in the cave. No eating, drinking, chewing tobacco or gum is allowed in the cave. Photography is permitted, but no tripods. Pets are not allowed in the cave.

Cave tours are moderately strenuous. Persons with claustrophobia, heart or respiratory conditions, or other physical limitations should reconsider. A tour is available, by request, for visitors with special needs. Call 605-745-4600 or ask at the information desk.

Do not leave your pets in your vehicle while visiting the cave or for any length of time. The temperatures inside a vehicle can become extreme, putting your pet in grave danger. Kennel space is available in Hot Springs or Custer.

#### RESERVATIONS

Most cave tours are firstcome, first-served, however reservations are strongly recommended for the Candlelight Tours and required for Wild Cave Tours. Reservations are accepted beginning one month before the tour. Reservations are also accepted for large groups. Please call 605-745-4600 for reservations.







# **TOUR FEES\***

Tickets must be purchased at least 5 minutes before tour time.

	Garden	Natural	Fairgrounds	<b>Candlelight</b>	Wild Cave
	of Eden	Entrance			
15.01	<b></b>	Φ0.00	ΦΩ ΩΩ	<b>\$0.00</b>	
Age 17-61	\$6.00	\$8.00	\$8.00	\$9.00 *	***\$20.00
Golden Age	**\$3.00	\$4.00	\$4.00	\$4.50	\$10.00
Age 6-16	\$3.00	\$4.00	\$4.00	***\$4.50	Not Permitted
Under 6	Free	Free	Free	Not Permitted	Not Permitted

- \* Holders of a Golden Access Card receive a 50% discount on tours.
- Person must possess a Golden Age Passport to receive the discount.
- \*\*\* Minimum age for Candlelight Tour is 8.
- \*\*\*\*Minimum age for the Wild Cave Tour is 16. The fee is \$20.00. Tour prices subject to change in 2005.

# PROGRAM SCHEDULES

#### **April 4 - May 1, 2004**

Visitor Center Open daily 8:00 a.m. - 5:00 p.m. Garden of Eden Tour 9:30, 11:30, 1:30, and 3:30



#### May 2 - 28, 2004

Visitor Center 8:00 a.m. - 6:00 p.m.

Natural Entrance Tour 9:00, 10:30, 11:30, 12:30, 1:30, 2:30, 3:30, and 4:30

#### May 29 - 31, 2004, Memorial Day Weekend

Visitor Center 8:00 a.m. - 6:00 p.m.

Garden of Eden Tour 11:00, 1:00, 3:00, and 5:00

Natural Entrance Tour 8:40, 9:20, 10:30, 11:30, 12:30, 1:30, 2:30, 3:30, and 4:30

Fairgrounds Tour 10:00, 12:00, 2:00, and 4:00

Campfire Program 8:30 p.m. Saturday and Sunday

#### June 1 - June 5, 2004

Visitor Center 8:00 a.m. - 6:00 p.m.

Garden of Eden Tour 12:30, 1:30, 2:30, and 3:30

Natural Entrance Tour 9:00, 10:00, 11:00, 12:00, 1:00, 2:00, 3:00, 4:00, and 5:00

#### June 6 - August 21, 2004

Visitor Center 8:00 a.m. - 7:00 p.m.

Garden of Eden Tour 10:40, 12:40, 2:40, and 4:40

Natural Entrance Tour 8:40, 9:00, 10:00, 11:00, 12:00, 1:00, 2:00, 3:00, 4:00, 5:00, 5:30, and 6:00.

Fairgrounds Tour 9:30, 10:20, 11:40, 12:20, 1:40, 2:20, 3:40, and 4:20

Candlelight Tour 10:30 a.m. and 1:30 p.m.

Wild Cave Tour 1:00 p.m.

Ranger led Hike 9:00 a.m.

Campfire Program 9:00 p.m

#### August 22 - September 6, 2004

Visitor Center 8:00 a.m. - 6:00 p.m.

Garden of Eden Tour 10:30, 1:40, 3:40, and 4:30

Natural Entrance Tour 9:00, 10:00, 11:00, 12:00, 1:00, 2:00, 3:00, 4:00, and 5:00

Fairgrounds Tour 9:30, 11:20, 12:20, 1:20, and 3:20

Candlelight Tour 1:30 p.m.

Wild Cave Tour 1:00 p.m. Weekends Only Aug. 22, 28, 29, and Sept. 4 and 5

Campfire Program 8:00 p.m.

#### September 7 - September 18, 2004

Visitor Center 8:00 a.m. - 6:00 p.m.

Natural Entrance Tour 9:00, 10:30, 11:30, 12:30, 1:30, 2:30, 3:30, and 4:30

Evening Program 7:00 p.m. Tuesday, Thursday, and Saturday beginning September 7.

#### September 19 - October 16, 2004

Visitor Center 8:00 a.m. - 5:00 p.m.

Garden of Eden Tour 9:30, 11:30, 1:30, and 3:30

#### October 17, 2004 - Early April, 2005

Visitor Center open daily 8:00 a.m. - 4:30 p.m. except: Thanksgiving, Christmas, and New Year's Day Garden of Eden Tour 10:00, 1:00, and 3:00

Tour schedules are subject to change. Please call 605-745-4600 to confirm tour times. Programs are subject to cancellation during severe weather.

# IN CASE OF AN EMERGENCY Dial 911 or

Contact any park ranger or call the visitor center at 605-745-4600.



# The Park Bookstore

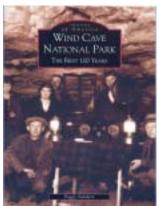
The Black Hills Parks & Forests Association sells books, maps, and **L** other park related publications in visitor centers at Wind Cave National Park, Jewel Cave National Monument, Custer State Park, the Buffalo Gap National Grasslands, and Black Hills National Forests. The association publishes books and materials about these areas.

Cooperating associations are non-profit, tax exempt organizations authorized by Congress to promote educational and scientific activities within national parks. All profits from association sales support the educational, interpretive, and research activities of these agencies.

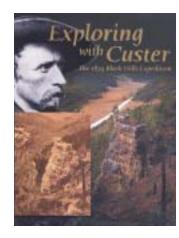
Many different types of publications are available in the bookstores including books specific to Wind Cave National Park and others about local natural and human history. These publications, maps, and items are available at the bookstore, by mail order, or from the association web site, www.blackhillsparks.org, fax: 605-745-7021, or email bhpf@blackhillsparks.org. Membership in the Black Hills Parks and Forests Association supports the organization and entitles members to a 15% discount on all purchases. The membership is \$29.25 per year. For more information call 605-745-7020.

Wind Cave: An Ancient World Beneath the Hills - In this wonderful, easy-to-read book, Art Palmer explains the geology of Wind Cave, how it is related to the Black Hills, and how the boxwork formed. The charts and graphs help make the topic easily understood by people unfamiliar with geology. The pictures of the unusual Wind Cave boxwork alone make this book well worth the investment. \$7.95





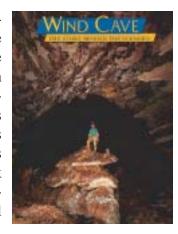
Wind Cave National Park: the First 100 Years - In 1903, Wind Cave National Park became the seventh national park in the nation and the first created to protect a cave. Peggy Sanders encapsulates the park's 100 year history in over 200 vintage images. Travel through time with the early cave and animal management teams, through the Great Depression, and into the present with a collection of classic pictures and stories. \$19.95



**Exploring with Custer – The 1874 Black** Hills Expedition - Custer's expedition to the Black Hills was better documented than any other of the Old West. William Illingworth photographed superb views and several diaries brimming with vivid detail remain. Grafe and Horsted's book blends past and present day photos with diary excerpts. Together they paint a portrait of life on the trail. The maps, directions, and GPS readings lead you to campsites, photo stops, and sometimes, ruts left by Custer's wagons. \$34.95

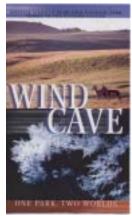
Wind Cave, The Story Behind the Scenery -

If you are interested in learning more about the ecosystems, wildlife, and history of Wind Cave National Park, this book by Ron Terry is an excellent choice. It contains outstanding photographs and information about the cave and its unusual boxwork formation. This book goes beyond the cave, including photos and insights about the park's incredible prairie. This book is part of a series that explores the natural, geological, and cultural history of the national parks.



Trails Illustrated Map, Black Hills Southeast - If you are interested in hiking in Wind Cave National Park or Custer State Park, this is the trail map to have. This tearproof, waterproof map details the hiking trails, campsites, roads, elevations, and many other standard features of a topographic map. Wind Cave National Park is illustrated on one side and Custer State Park and the Black Elk Wilderness are on the other side. The map is part of a series of National Geographic Trails Illustrated Maps. There is also a Black Hills Northeast map detailing the Black Hills National Forest. \$9.95





Wind Cave: One Park, Two Worlds - takes viewers on a journey into two vastly different landscapes of uncompromising beauty - the prairie and the cave. This 20 minute movie tells the dramatic stories of Wind Cave National Park's natural and human history, including the story of Alvin MacDonald - the first explorer of this subterranean world and the story of the bison - the symbol of the Great Plains. Through breathtaking photography this video captures the spirit, mystery, and timeless beauty of one of America's oldest National Parks.

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Mail tube (cave maps) \$3.50